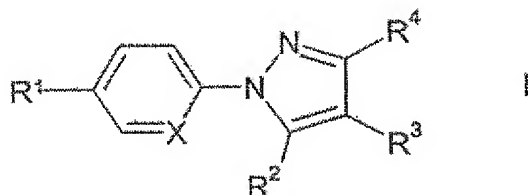


The listing of claims will replace all prior versions, and listings, of claims in the application:

**Listing of Claims:**

1. (Currently Amended) A compound of formula I



in which

$R^1$  denotes ~~(CH<sub>2</sub>)<sub>n</sub>Het1, or (CH<sub>2</sub>)<sub>n</sub>Ar, or cycloalkyl having 3 to 7 C atoms,~~

Het1 is 4-pyridyl, thiophen-2-yl or thiophen-3-yl, which is unsubstituted or mono- or polysubstituted by CN, A and/or Hal.

$R^2$  denotes Het2 ~~(CH<sub>2</sub>)<sub>n</sub>Het2, (CH<sub>2</sub>)<sub>n</sub>Ar, or cycloalkyl having 3 to 7 C atoms,~~

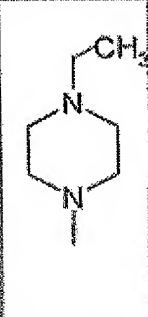
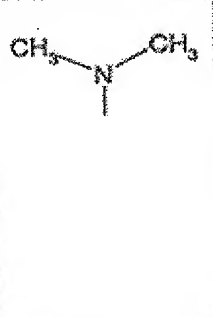
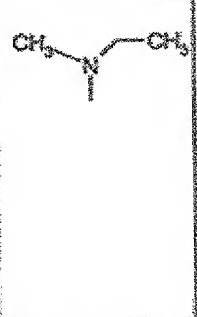
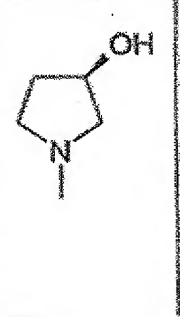
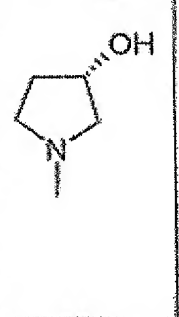
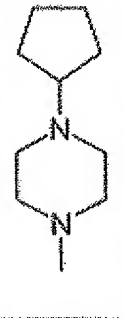
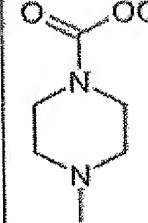
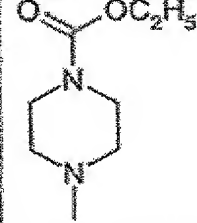
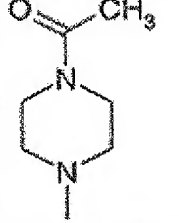
is 2- or 3-furanyl, which is unsubstituted or mono- or polysubstituted by A and/or Hal.

$R^3, R^4$  one of the radicals  $R^3$  or  $R^4$  denotes H, and the other of the radicals  $R^3$  or  $R^4$

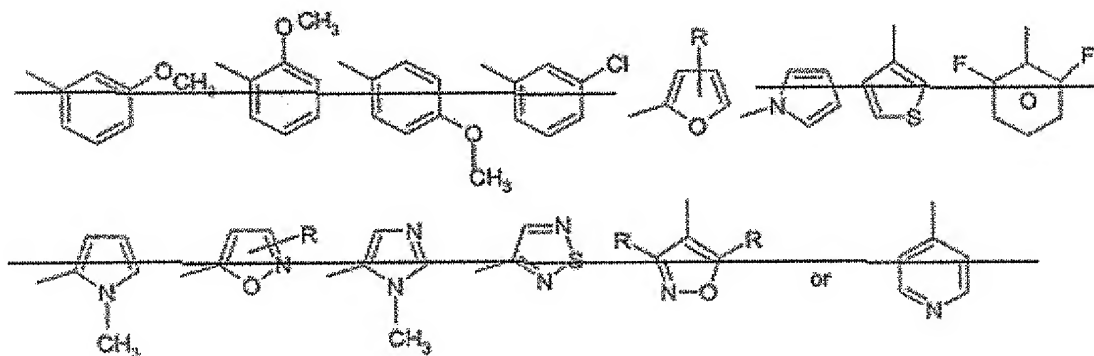
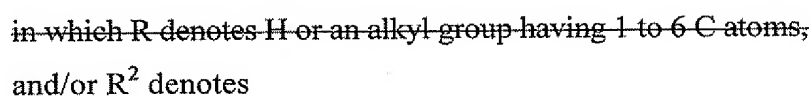
denotes ~~denote~~  $H$ ,  $(CH_2)_nCO_2R^5$ ,  $(CH_2)_nCOHet3$ ,  $CHO$ ,  $(CH_2)_nOR^5$ ,  $(CH_2)_nHet3$ ,  $(CH_2)_nN(R^5)_2$ ,  $CH=N-OA$ ,  $CH_2CH=N-OA$ ,  $(CH_2)_nNHOA$ ,  $(CH_2)_nN(R^5)Het3$ ,  $(CH_2)_nCH=N-Het3$ ,  $(CH_2)_nOCOR^5$ ,  $(CH_2)_nN(R^5)CH_2CH_2OR^5$ ,  $(CH_2)_nN(R^5)CH_2CH_2OCF_3$ ,  $(CH_2)_nN(R^5)C(R^5)HCOOR^5$ ,  $(CH_2)_nN(R^5)CH_2COHet3$ ,  $(CH_2)_nN(R^5)CH_2Het3$ ,  $(CH_2)_nN(R^5)CH_2CH_2Het3$ ,  $(CH_2)_nN(R^5)CH_2CH_2N(R^5)CH_2COOR^5$ ,  $(CH_2)_nN(R^5)CH_2CH_2N(R^5)_2$ ,  $CH=CHCOOR^5$ ,  $CH=CHCH_2NR^5Het3$ ,  $CH=CHCH_2N(R^5)_2$ ,  $CH=CHCH_2OR^5$  or  $(CH_2)_nN(R^5)Ar$ ,

~~with the proviso that in each case one of the radicals  $R^3$  or  $R^4$  denotes H,~~

Het3 is 1-piperidyl, 1-piperazyl, 1-(4-methyl)piperazyl, 4-methylpiperazin-1-ylamine, 1-pyrrolidinyl, 1-pyrazolidinyl, 1-(2-methyl)pyrazolidinyl, 1-imidazolidinyl or 1-(3-methyl)imidazolidinyl or 4-pyridyl, which may be unsubstituted or substituted by one or more CN groups, 2- or 4-pyridazyl, 2-, 4- or 5-pyrimidyl, or 2- or 3-pyrazinyl or one of the following groups

- $R^5$  denotes H or A,  
A denotes straight-chain or branched alkyl or alkoxy having 1 to 10 C atoms, alkenyl or alkoxyalkyl having 2 to 10 C atoms,  
~~Het denotes a saturated, unsaturated or aromatic mono- or bicyclic heterocyclic or linear or branched organic radical containing one or more heteroatoms which is unsubstituted or mono- or polysubstituted by A and/or Hal,~~  
Ar denotes a phenyl radical which is unsubstituted or mono- or polysubstituted by A and/or Hal,  $OR^5$ ,  $OOCR^5$ ,  $COOR^5$ ,  $CON(R^5)_2$ , CN,  $NO_2$ ,  $NH_2$ ,  $NHCOR^5$ ,  $CF_3$  or  $SO_2CH_3$ ,  
n denotes 0, 1, 2, 3, 4 or 5,  
Hal denotes F, Cl, Br or I, and  
X denotes N, or  
in the case where  $R^1$  denotes one of the following groups

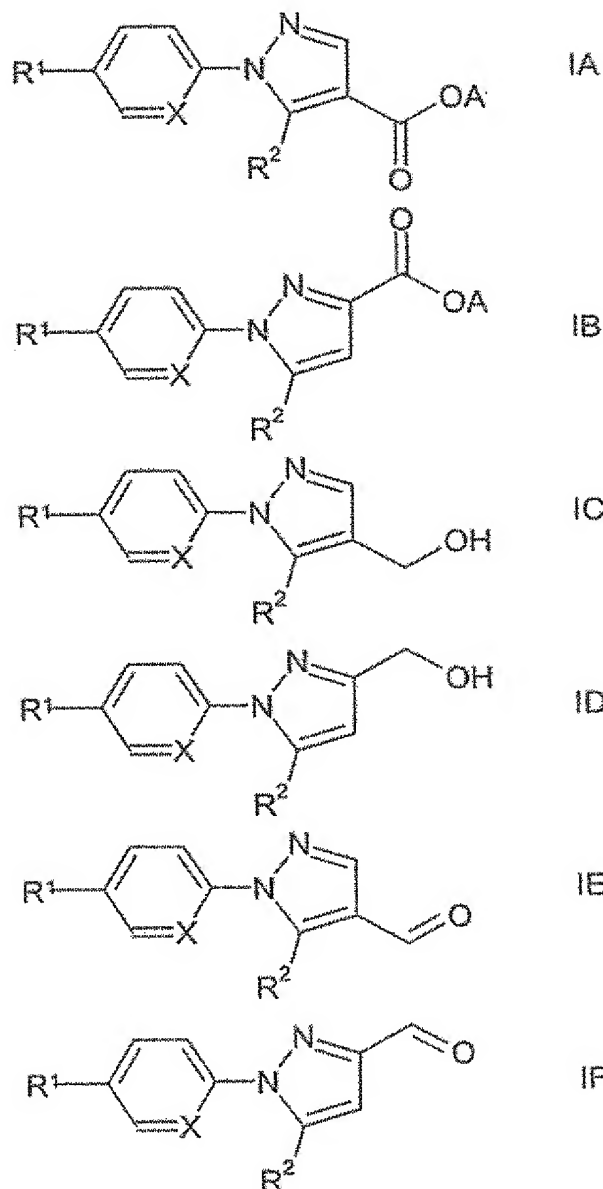


in which R denotes H or an alkyl group having 1 to 6 C atoms, alternatively denotes CH,

or an enantiomer, racemate, or a mixture of enantiomers thereof,  
or a pharmaceutically acceptable salt thereof.

2. (Previously Presented) A compound of formula I according to Claim 1, in which R<sup>1</sup> denotes phenyl, 2-, 3- or 4-cyanophenyl, 2-, 3- or 4-fluorophenyl, 2-, 3- or 4-methyl-, -ethyl-, -n-propyl- or -n-butylphenyl, 2,3-, 2,4-, 2,5-, 2,6-, 3,4-, 3,5- or 3,6-difluoro-, -dichloro- or -dicyanophenyl, 3,4,5-trifluorophenyl, 3,4,5-trimethoxy- or -triethoxyphenyl, thiophen-2-yl or thiophen-3-yl.

- |    |                        |  |
|----|------------------------|--|
| 3. | (Previously Presented) | A compound of formula I according to claim 1, in which $R^3$ denotes H.                        |
| 4. | (Previously Presented) | A compound of formula I according to claim 1, in which $R^4$ denotes H.                        |
| 5. | (Cancelled)            |  |
| 6. | (Previously Presented) | A compound of formula I according to claim 1, in which X denotes N.                            |
| 7. | (Currently Amended)    | A compound <u>according to claim 1, which</u><br><u>is</u> of formula IA, IB, IC, ID, IE or IF |



in which

$R^1$ ,  $R^2$ , X and A are as defined for the compound of formula I,  $(CH_2)_n$ Het, denotes  $(CH_2)_n$ Het,

$(CH_2)_n$ Ar, or cycloalkyl having 3 to 7 C atoms,

$R^2$  denotes  $(CH_2)_n$ Het,  $(CH_2)_n$ Ar, or cycloalkyl having 3 to 7 C atoms,

A denotes straight chain or branched alkyl or alkoxy having 1 to 10 C atoms, alkenyl or alkoxyalkyl having 2 to 10 C atoms,

Het denotes a saturated, unsaturated or aromatic mono- or bicyclic heterocyclic or linear or branched organic radical containing one or more heteroatoms which is unsubstituted or mono- or polysubstituted by A and/or Hal,

Ar denotes a phenyl radical which is unsubstituted or mono- or

polysubstituted by A and/or Hal,  $OR^5$ ,  $OOOR^5$ ,  $COOR^5$ ,  $CON(R^5)_2$ ,  $CN$ ,  
 $NO_2$ ,  $NH_2$ ,  $NHCOR^5$ ,  $CF_3$  or  $SO_2CH_3$ ;

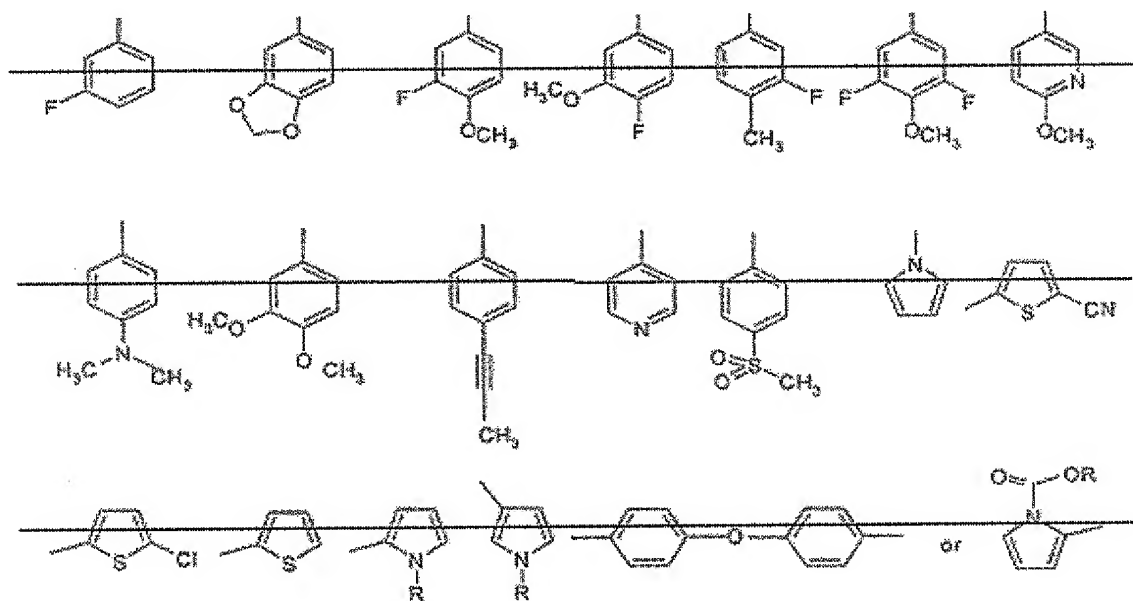
$R^5$  ————— denotes H or A;

n ————— denotes 0, 1, 2, 3, 4 or 5;

Hal ————— denotes F, Cl, Br or I, and

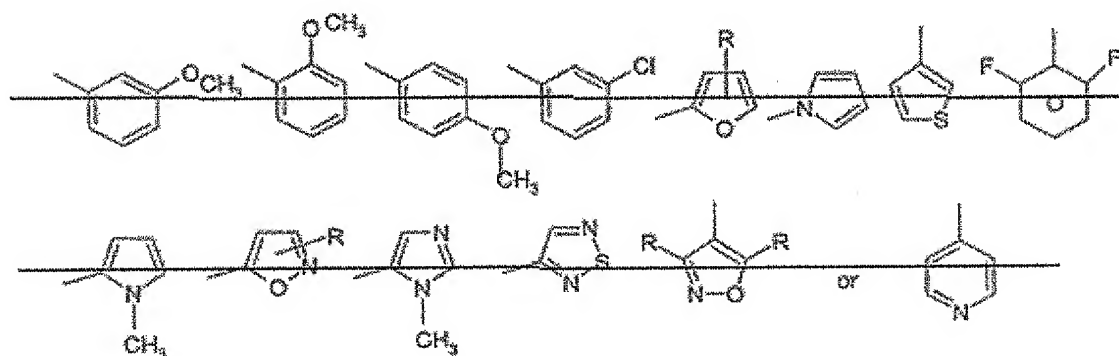
X ————— denotes N, or

————— in the case where  $R^1$  denotes



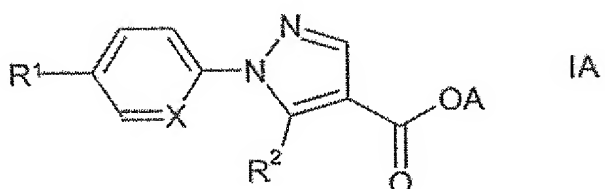
in which R denotes H or an alkyl group having 1 to 6 C atoms;

and/or  $R^2$  denotes

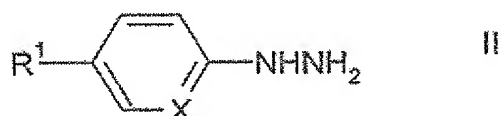


in which R denotes H or an alkyl group having 1 to 6 C atoms,  
alternatively denotes CH<sub>3</sub>,  
or a salt thereof.

8. (Previously Presented) A process for preparing a compound of  
formula IA according to claim 7



comprising reacting a compound of formula II



or an acid-addition salt thereof, in which

R<sup>1</sup> and X have the meanings indicated for the compound of formula IA,

with a compound of formula III



in which

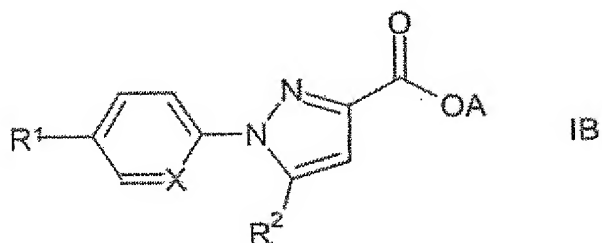
A and R<sup>2</sup> have the meanings indicated for the compound of formula IA,

and/or

a basic compound of formula IA is converted into one of its salts by treatment with an acid.

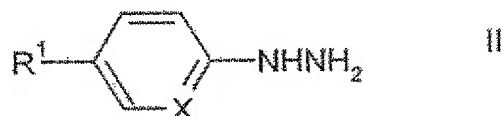
9. (Previously Presented) A process for preparing a compound of

formula IB according to claim 7



in which  $R^1$ ,  $R^2$ ,  $R^3$ ,  $R^4$ , X and A have the meanings indicated for the compound of formula IB,

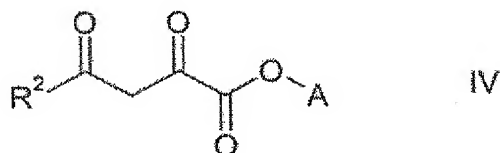
comprising reacting a compound of formula II



or an acid-addition salt thereof, in which

$R^1$  and X have the meanings indicated for the compound of formula IB,

with a compound of formula IV



in which

A and  $R^2$  have the meanings indicated for the compound of formula IB,

and/or

a basic compound of formula IB is converted into one of its salts by treatment with an acid.

10. (Previously Presented) A pharmaceutical composition comprising a compound of formula I according to claim 1 and a pharmaceutically acceptable carrier.

11. (Previously Presented) A method for the treatment of a disease which can be influenced by the binding of a compound of formula I to 5 HT receptors, comprising administering to a subject in need thereof an effective amount of a pharmaceutical



composition according to claim 10.

12. (Previously Presented) A method for antagonizing a 5-HT receptor, comprising administering to a subject in need thereof an effective amount of a pharmaceutical composition according to claim 10.

13. (Previously Presented) A method for antagonizing a 5-HT<sub>2A</sub> receptor, comprising administering to a subject in need thereof an effective amount of a pharmaceutical composition according to claim 10.

14. (Cancelled)

15. (Previously Presented) A process for preparing a pharmaceutical composition according to claim 10, comprising mixing together a compound of formula I and a pharmaceutically acceptable carrier.

16. (Currently Amended) A method for the treatment of psychoses, a neurological disorder, amyotrophic lateral sclerosis, eating disorder, bulimia, anorexia nervosa, premenstrual syndrome and/or for positively influencing obsessive compulsive disorder, comprising administering to a subject in need thereof an effective amount of a pharmaceutical composition according to claim 10.

17-22. (Cancelled)

23. (Currently Amended) A compound of claim 1, in which  
R<sup>1</sup> denotes Het<sub>1</sub> or Ar;  
R<sup>2</sup> denotes Het or Ar;  
R<sup>3</sup>, R<sup>4</sup> denote H, (CH<sub>2</sub>)<sub>n</sub>CO<sub>2</sub>R<sup>5</sup>, CH=N-OA, CH<sub>2</sub>CH=N-OA, (CH<sub>2</sub>)<sub>n</sub>NHOA,  
(CH<sub>2</sub>)<sub>n</sub>N(R<sup>5</sup>)Het, (CH<sub>2</sub>)<sub>n</sub>CH=N-Het, (CH<sub>2</sub>)<sub>n</sub>OCOR<sup>5</sup>, (CH<sub>2</sub>)<sub>n</sub>N(R<sup>5</sup>)CH<sub>2</sub>CH<sub>2</sub>OR<sup>5</sup>,  
(CH<sub>2</sub>)<sub>n</sub>N(R<sup>5</sup>)CH<sub>2</sub>CH<sub>2</sub>OCF<sub>3</sub>, (CH<sub>2</sub>)<sub>n</sub>N(R<sup>5</sup>)C(R<sup>5</sup>)HCOOR<sup>5</sup>,  
(CH<sub>2</sub>)<sub>n</sub>N(R<sup>5</sup>)CH<sub>2</sub>COHet, (CH<sub>2</sub>)<sub>n</sub>N(R<sup>5</sup>)CH<sub>2</sub>Het, (CH<sub>2</sub>)<sub>n</sub>N(R<sup>5</sup>)CH<sub>2</sub>CH<sub>2</sub>Het,  
(CH<sub>2</sub>)<sub>n</sub>N(R<sup>5</sup>)CH<sub>2</sub>CH<sub>2</sub>N(R<sup>5</sup>)CH<sub>2</sub>COOR<sup>5</sup>, (CH<sub>2</sub>)<sub>n</sub>N(R<sup>5</sup>)CH<sub>2</sub>CH<sub>2</sub>N(R<sup>5</sup>)<sub>2</sub>,  
CH=CHCOOR<sup>5</sup>, CH=CHCH<sub>2</sub>NR<sup>5</sup>Het, CH=CHCH<sub>2</sub>N(R<sup>5</sup>)<sub>2</sub>, CH=CHCH<sub>2</sub>OR<sup>5</sup> or

$(CH_2)_n N(R^5)Ar$ , with the proviso that in each case one of the radicals  $R^3$  or  $R^4$  denotes H,

$R^5$  ————— denotes H or A,

A ————— denotes straight chain or branched alkyl or alkoxy having 1 to 10 C atoms;  
alkenyl or alkoxyalkyl having 2 to 10 C atoms,

Het ————— denotes a saturated, unsaturated or aromatic mono- or bicyclic heterocyclic or  
linear or branched organic radical containing one or more heteroatoms which  
is unsubstituted or mono- or polysubstituted by A and/or Hal,

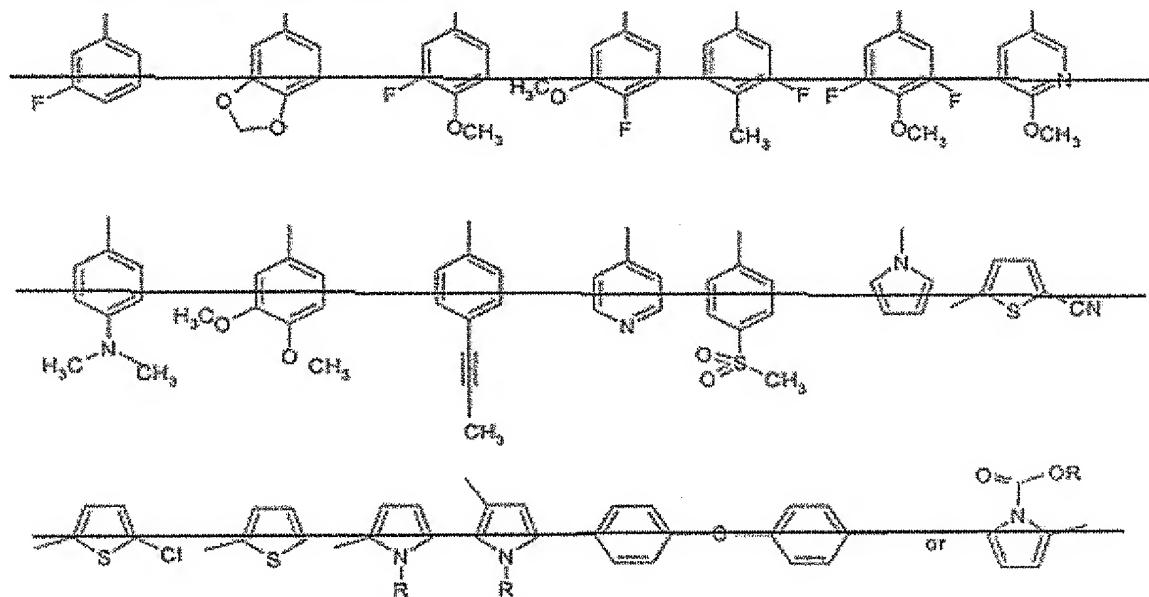
Ar ————— denotes a phenyl radical which is unsubstituted or mono- or  
polysubstituted by A and/or Hal,  $OR^5$ ,  $OOOR^5$ ,  $COOR^5$ ,  $CON(R^5)_2$ , CN,  
 $NO_2$ ,  $NH_2$ ,  $NHCOR^5$ ,  $CF_3$  or  $SO_2CH_3$ ,

n ————— denotes 0, 1, 2 or 3,

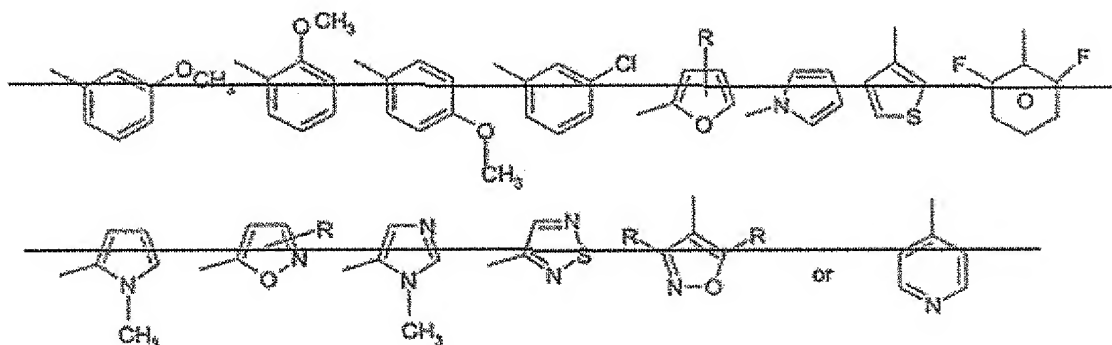
Hal ————— denotes F, Cl, Br or I, and

X ————— denotes N, or

————— in the case where  $R^4$  denotes



in which R denotes H or an alkyl group having 1 to 6 C atoms;  
and/or  $R^2$  denotes



in which R denotes H or an alkyl group having 1 to 6 C atoms;  
alternatively denotes CH.

24-27. (Cancelled)

28. (Previously Presented) A method for antagonizing a 5-HT<sub>2A</sub> receptor in vitro, comprising administering to said 5-HT<sub>2A</sub> receptor an effective amount of a compound according to claim 1.

29. (Currently Amended) A method for the treatment of psychoses, amyotrophic lateral sclerosis, bulimia, anorexia nervosa, premenstrual syndrome and/or for positively influencing obsessive compulsive disorder, comprising administering to a subject in need thereof an effective amount of a pharmaceutical composition according to claim 10.

30. (New) A method for the treatment of amyotrophic lateral sclerosis, comprising administering to a subject in need thereof an effective amount of a pharmaceutical composition according to claim 10.

31. (New) A method for the treatment of bulimia, comprising administering to a subject in need thereof an effective amount of a pharmaceutical composition according to claim 10.

32. (New) A method for the treatment of anorexia nervosa, comprising

administering to a subject in need thereof an effective amount of a pharmaceutical composition according to claim 10.

33. (New) A method for the treatment of premenstrual syndrome, comprising administering to a subject in need thereof an effective amount of a pharmaceutical composition according to claim 10.

34. (New) A method for positively influencing obsessive compulsive disorder, comprising administering to a subject in need thereof an effective amount of a pharmaceutical composition according to claim 10.

35. (New) A compound of formula I according to Claim 1, in which one of the radicals  $R^3$  or  $R^4$  denotes H and the other of the radicals  $R^3$  or  $R^4$  denotes  $(CH_2)_nCO_2R^5$ ,  $(CH_2)_nCOHet3$ ,  $(CH_2)_nHet3$ ,  $(CH_2)_nN(R^5)Het3$ ,  $(CH_2)_nCH=N-Het3$ ,  $(CH_2)_nN(R^5)CH_2CH_2OR^5$ ,  $(CH_2)_nN(R^5)CH_2CH_2OCF_3$ ,  $(CH_2)_nN(R^5)C(R^5)HCOOR^5$ ,  $(CH_2)_nN(R^5)CH_2COHet3$ ,  $(CH_2)_nN(R^5)CH_2Het3$ ,  $(CH_2)_nN(R^5)CH_2CH_2Het3$ ,  $(CH_2)_nN(R^5)CH_2CH_2N(R^5)CH_2COOR^5$ ,  $(CH_2)_nN(R^5)CH_2CH_2N(R^5)_2$ , or  $(CH_2)_nN(R^5)Ar$ , wherein n is 1, 2, 3, 4 or 5.

36. (New) A compound of formula I according to Claim 1, in which one of the radicals  $R^3$  or  $R^4$  denotes H and the other of the radicals  $R^3$  or  $R^4$  denotes  $(CH_2)_nHet3$ , wherein n is 1, 2, 3, 4 or 5.